CLAIMS

1. Method for detecting oscillation in a repeater system comprising:

embedding a wireless communication device circuit in the repeater; and

using the wireless communication device circuit to determine if the repeater system is in oscillation.

2. The method of claim 1, wherein using the wireless communication device circuit comprises:

establishing a call from the wireless communication device circuit to a base station; and

determining oscillation if the call cannot be established.

3. The method of claim 1, wherein using the wireless communication device circuit comprises:

using the wireless communication device circuit to measure signal quality from the base station; and

determining oscillation if the signal quality meets a certain criteria.

4. The method of claim 3, wherein determining oscillation comprises determining oscillation if the signal quality degrades below a certain level.

5. The method of claim 3, wherein determining oscillation comprises determining oscillation if the signal quality degrades from a level that existed before the repeater was used.

6. The method of claim 3, wherein using the wireless communication device circuit comprises:

obtaining signal to noise ratio value to measure the signal quality.

7. The method of claim 1, wherein using the wireless communication device circuit comprises:

using the wireless communication device circuit to estimate at least one open loop power control parameter;

establishing a communication link from the wireless communication device circuit to a base station using the estimated open loop power control parameter;

receiving at least one closed loop power control command from the base station; and

determining oscillation if the closed loop power control command is greater than a certain amount.

8. The method of claim 7, wherein using the wireless communication device circuit comprises estimating at least a required transmit power to complete the call, wherein receiving closed loop power control commands comprises receiving at least power adjustment information, and wherein determining oscillation comprises determining oscillation if the power adjustment information is greater than a certain amount.

9. The method of claim 1, further comprising:

reducing gain of repeater if the repeater system is in oscillation.

10. Apparatus for detecting oscillation in a repeater system comprising:

a wireless communication device circuit embedded in the repeater; and

means for using the wireless communication device circuit to determine if the repeater system is in oscillation.

11. The apparatus of claim 10, wherein means for using the wireless communication device circuit comprises:

means for establishing a call from the wireless communication device circuit to a base station; and

means for determining oscillation if the call cannot be established.

12. The apparatus of claim 10, wherein means for using the wireless communication device circuit comprises:

means for using the wireless communication device circuit to measure signal quality from the base station; and

means for determining oscillation if the signal quality meets a certain criteria.

13. The apparatus of claim 12, wherein means for determining oscillation comprises determining oscillation if the signal quality degrades below a certain level.

14. The apparatus of claim 12, wherein means for determining oscillation comprises determining oscillation if the signal quality degrades from a level that existed before the repeater was used.

15. The apparatus of claim 12, wherein means for using the wireless communication device circuit comprises:

means for obtaining signal to noise ratio value to measure the signal quality.

16. The apparatus of claim 10, wherein means for using the wireless communication device circuit comprises:

means for using the wireless communication device circuit to estimate at least one open loop power control parameter;

means for establishing a communication link from the wireless communication device circuit to a base station using the estimated open loop power control parameter;

means for receiving at least one closed loop power control command from the base station; and

means for determining oscillation if the closed loop power control command is greater than a certain amount.

17. The apparatus of claim 16, wherein means for using the wireless communication device circuit comprises estimating at least a required transmit power to complete the call, wherein means for receiving closed loop power control commands comprises means for receiving at least power adjustment information, and wherein means for determining oscillation comprises

determining oscillation if the power adjustment information is greater than a certain amount.

18. The apparatus of claim 10, further comprising:

means for reducing gain of repeater if the repeater system is in oscillation.

19. Apparatus of for detecting oscillation in a repeater system comprising:

a wireless communication device (WCD) configured to detect if the repeater system is in oscillation; and

a processor coupled to the WCD, configured to reduce the gain of the repeater system if the repeater system is in oscillation.